

Shear angle Profile Tool Ø250 Z8

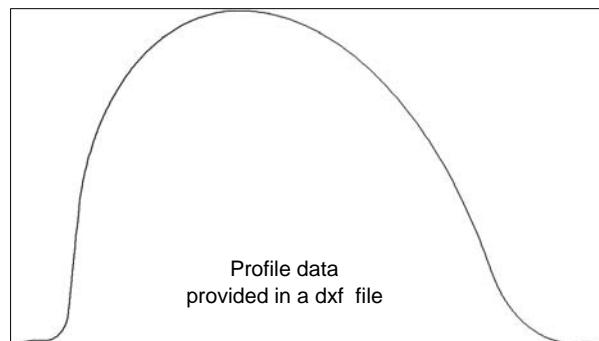
A03-110

Profile grinding of a shear angle tool referred to a customized DXF-file. The tool is mounted left-turning. Holder ISO 50. Roughing stepsize 0.1mm. Fin grinding stepsize 0.01mm. The concentrical runout after grinding was 0.004mm measured inside the machine. The tool is used to mill rotor screws for air compressors. To guarantee the leak tightness of the compressor, it is very important that the profile tolerance is in the µm-range.



1. Cycletime for profile grinding

Workpiece:	Diameter 250 mm, Z 8, Profile see below Material HSS		
Operations	Probe	Prf rough	Prf fin
Feed [mm/Min]	200	60	60
Power [kW]		3	3
Cutting feed [m/s]		27	27
Used wheels		1	1
Grinding time [s]	40	1150	1150
Total cycle time	39 Min		

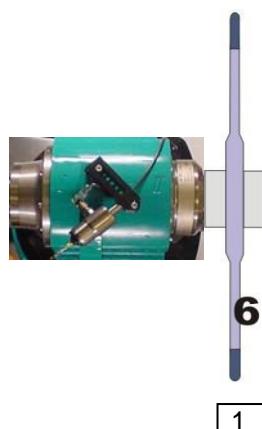


The cycle times are indicative. Material to be ground, grinding wheels, coolants can influence the cycle times considerably.



2. Used Grinding Wheels

1	14F1 Ø200 R1.5
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3. Machine and Software Requirements

Machines: 5 axes CNC grinders : GEMINI DMR

Coolant: Synthetic Oil, pressure 6 bar

Control: Fanuc 310i

Software: Quinto 5

Accessories:

Responsable engineer: STR / 11.08.2011

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